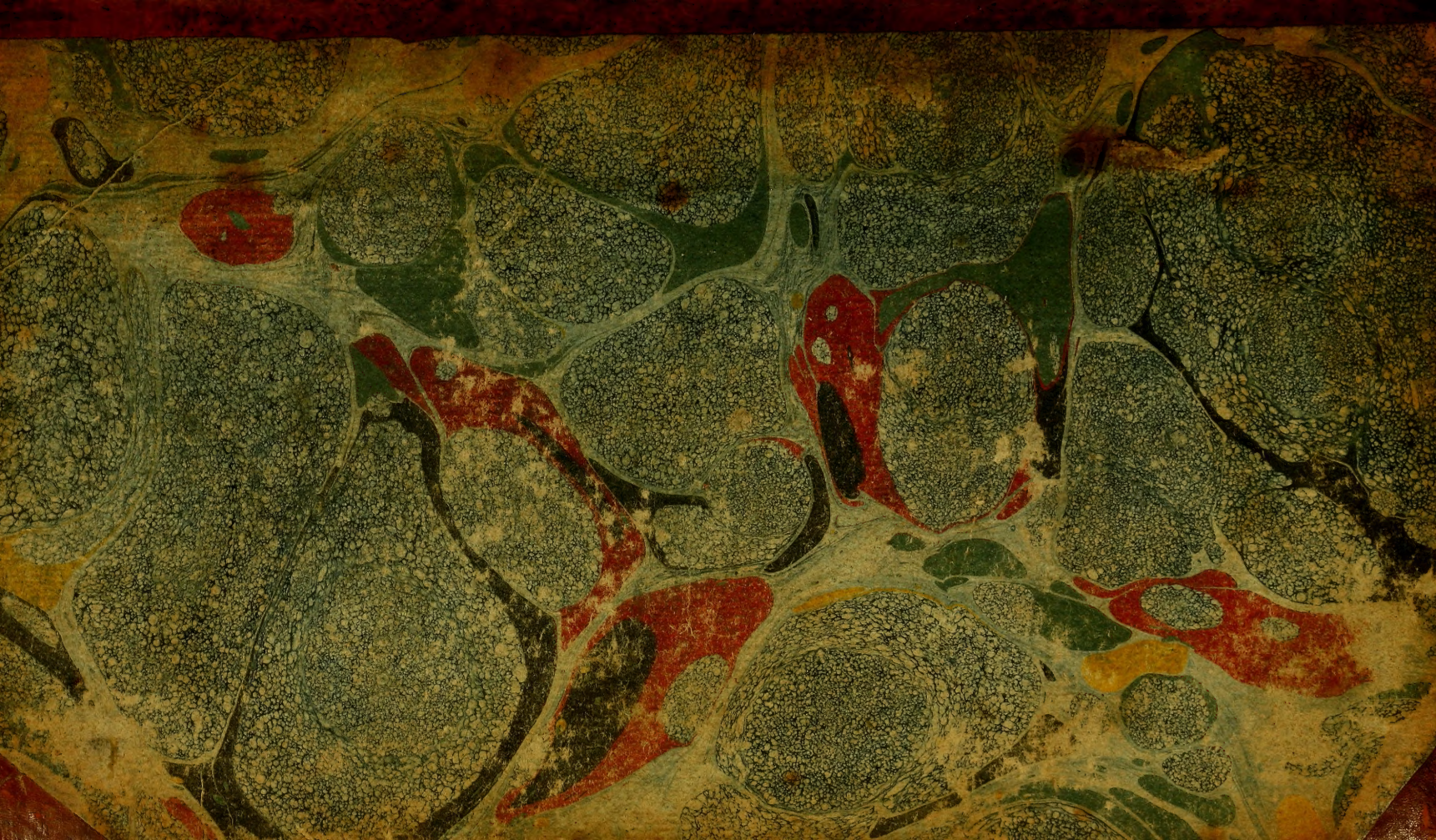


Entomology.

Library of the Museum

OF

COMPARATIVE ZOÖLOGY,

AT HARVARD COLLEGE, CAMBRIDGE, MASS.

Founded by private subscription, in 1861.

Deposited by
~~The gift of~~ LOUIS AGASSIZ.

No. 3525.

THE

NATURAL HISTORY

OF

BRITISH INSECTS;

EXPLAINING THEM

IN THEIR SEVERAL STATES,

WITH THE PERIODS OF THEIR TRANSFORMATIONS, THEIR FOOD, OECONOMY, &c.

TOGETHER WITH THE

HISTORY OF SUCH MINUTE INSECTS

AS REQUIRE INVESTIGATION BY THE MICROSCOPE.

THE WHOLE ILLUSTRATED BY

COLOURED FIGURES,

DESIGNED AND EXECUTED FROM LIVING SPECIMENS.

By E. DONOVAN.

VOL. VII.

LONDON:

Printed for the Author,

And for F. and C. Rivington, N° 62, St. Paul's Church-Yard.

MDCCXCVIII.

S

Oiled 4/1982 RB

MCZ LIBRARY
HARVARD UNIVERSITY
CAMBRIDGE, MA USA

THE

NATURAL HISTORY

OF

BRITISH INSECTS.

PLATE CCXVII.

PAPILIO HIPPOTHOE.

GREAT COPPER BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clubbed. Wings erect when at reſt. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings intire, margin white. Underſide aſh colour, with numerous black eye-ſhaped ſpots.

PAPILIO HIPPOTHOE alis integris: margine albo, ſubtus cinereis: punctis ocellaribus numeroſis. *Linn. Syſt. Nat.* 2. 793. 254.

Fab. Spec. Inſ.—Ent. Syſt. 2. *T.* 3. *p.* 1. 309. 172.
Degeer Inſ. 2. *tab.* 2.
Roeſ. Inſ. 3. *tab.* 37. *fig.* 6. 7.
Eſp. pap. tab. 38. *fig.* 1.
Ernſt, Inſ. Europ. 1. *tab.* 44. *fig.* 92. 93.

Papilio Hippothoe is the largeſt and rareſt of that kind of Butterflies called *Coppers*, by Engliſh collectors of Inſects. We have not heard that it has been taken in this country for ſome years paſt: our ſpecimens were met with in Scotland.

The female is larger than the male; it has alſo a greater number of black ſpots on the wings.

PLATE

MCZ LIBRARY
HARVARD UNIVERSITY
CAMBRIDGE, MA USA

1

2

PLATE CCXVIII.

FIG. I.

CIMEX GONYMELAS.

BLACK-KNEE FIELD BUG.

HEMIPTERA.

GENERIC CHARACTER.

Roſtrum inflected. Antennæ longer than the thorax. Back flat. Thorax margined.

SPECIFIC CHARACTER.

Brown. Abdomen red. Antennæ annulated with black. Knees of the ſame colour.

We conſider this as a nondeſcript Inſect. It was taken at Darent Wood, Kent, early in May.

FIG. II.

CIMEX HAEMORRHOIDALIS.

HEMIPTERA.

CIMEX.

SPECIFIC CHARACTER

AND

SYNONYMS.

Greeniſh. Spines of the Thorax obtuſe. Breaſt-piece terminate in a long ſpine. Antennæ black.

CIMEX

CIMEX HAEMORRHOIDALIS: thorace obtuſe, ſpinoſo ſubvireſcens, antennis nigris, ſterno porrecto. *Linn. Syſt. Nat.*—*Fn. Sv.*—*Fab. Ent. Syſt.* 4. *p.* 98. 76.

This Inſect was found at the ſame time and place as the preceding ſpecies. It is the moſt elegantly coloured creature of its tribe we have hitherto found. *Cimex Luridus* is more beautiful in the larva, but not in the winged ſtate.

MCZ LIBRARY
HARVARD UNIVERSITY
CAMBRIDGE, MASS.

PLATE CCXIX.

PHALÆNA PRODROMARIA.

OAK-BEAUTY MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ ſetaceous. Wings in general deflexed, when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Antennæ feathered. Wings white, ſpeckled with numerous black ſpots. Two irregular, and nearly tranſverſe bars of dark brown, on the upper wings.

PHALÆNA PRODROMARIA, pectinicornis alis albis nigro punctatis; faſciis duabus latis fuſcis. *Fab. Ent. Syſt. T.* 3. *p.* 1. 159. 105.

Phalæna Prodromaria. *Wien. Verz.* 99. 1.

The larva of this Moth, like others of the *geometræ*, raiſes itſelf when walking, into the form of an arch or loop: it is of an obſcure grey and brown colour, faintly mottled: the head is red. This larva is ſeldom taken, and when taken, is reared to the fly ſtate with the utmoſt difficulty. It ſeems a local ſpecies; for we have

have never heard that it has been found, except on the Oak trees* in *Richmond Park*. It feeds on the higheſt branches of the trees, but deſcends into the earth to become a pupa. It appears in the fly ſtate in March.

The male Inſect is conſiderably ſmaller than the female. Its horns, or antennæ, are alſo larger, and more feathered. This is a ſcarce Inſect. It is found in Germany; and a variety of it has been received from North America.

---

* It feeds alſo on Lime trees.

PLATE CCXX.

PHRYGANEA RHOMBICA.

SPRING FLY.

NEUROPTERA.

GENERIC CHARACTER.

Mouth furniſhed with four palpi. Antennæ longer than the Thorax. Firſt Wings lay horizontally on the body. Under Wings folded, and concealed beneath.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings greyiſh brown. Firſt pair marked with rhombic whitiſh ſpots.

PHRYGANEA RHOMBICA alis griſeis: macula laterali rhombica alba.
Linn. Syſt. Nat.—Fab. Ent. Syſt. T. 4. *p.* 77. 13.
Roeſ. Inſ. 2. *Aqu.* 2. *tab.* 16.
Schæff. Icon. tab. 99. *fig.* 5. 6.

The Phryganea undergo their transformations in the water: in the larva ſtate they are taken by the fiſhermen for bait; and, in ſome parts of Holland, are found ſo abundant, that they are uſed as a cheap manure for the land. In the larva ſtate, they gene-

 rally

rally form a ſort of covering, or tube, for their defenceleſs bodies. It is open only at one end, at which its head and fore legs are protruded, to take its prey. Some ſpecies form theſe coverings of weeds and ſmall ſhells, gravel, ſand, &c. That of our preſent ſpecies, is compoſed of little pieces of the ſtalks of graſs, cut into an even form, and laid tranſverſely on each other. It attaches this tube to the roots of ſome aquatic plants, and undergoes its transformations in it. In the annexed plate, we have repreſented the larva taken from the tube, and the pupa having the tube opened to exhibit its ſituation therein.

The Fly is very common about ponds, rivers, and marſhy places.

PLATE CCXXI.

PHALÆNA MYRTILLI.

SCARCE BROAD BORDER YELLOW UNDERWING MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax creſted. Wings deflexed, brown, ſpotted with white. Anterior wings yellow, with a deep black border.

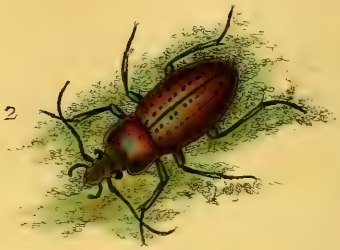
PHALÆNA MYRTILLI criſtata alis deflexis ferrugineis albo maculatis: poſticis luteis, faſcia lata ſubmarginali nigra. *Lin. Syſt. Nat.—Fab. Ent. Syſt. T.* 3. *p.* 2. 126. 379.

A ſmall Inſect, but of ſingular beauty; it feeds on the whortle berry and ſloe.

This ſpecies has been taken by Mr. Crow, of Faverſham. The only ſpecimen we ever met with, was found in the caterpillar ſtate, in Kent, in the month of May. The Fly came forth in June.

PLATE

LIBRARY
MBRIDGE, MA USA


2

3

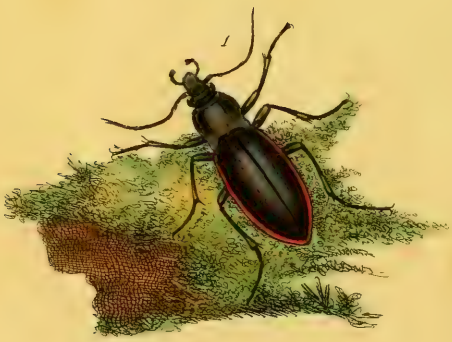

1

PLATE CCXXII.

FIG. I.

CARABUS VIOLACEUS.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ ſetaceous. Thorax ſomewhat heart ſhaped, margined. Elytra margined alſo.

SPECIFIC CHARACTER

AND

SYNONYMS.

Apterous, black. Margin of the Thorax and Wing caſes, gloſſy violet. Edges ſmooth.

CARABUS VIOLACEUS apterus niger thorace elytrorumque marginibus violaceis, elytris lævibus.—*Fab. Ent. Syſt.* 1. 19. 125.

Carabus Violaceus. *Paykull Monogr.* 12. 4.
Friſch Inſ. 13. *tab.* 23.

The larva of ſome Carabi live in the ground, others in decayed wood. They prey on the ſmaller kinds of Inſects. Fabricius deſcribes one hundred and ninety-five ſpecies; a conſiderable number of theſe are natives of Europe. Carabus Violaceus is found in fields.

FIG. II.

CARABUS GEMMATUS.

COLEOPTERA.

CARABUS.

SPECIFIC CHARACTER

AND

SYNONYMS.

Apterous, black. Wing caſes marked with ſtriæ; and three rows of indented double ſpots, bronzed.

CARABUS GEMMATUS apterus niger elytris ſtriatis: punctis æneis bilobis excavatis triplice ſerie.—*Fab. Ent. Syſt.* 1. 19. 127.

Carabus ſtriatus.—*Degeer Inſ.* 4. 90. 5. *tab.* 3. *fig.* 1.

Carabus gemmatus.—*Paykull Monogr.* 15. 6.

This ſpecies has commonly been miſtaken for *Carabus hortenſis:* the difference, however, between the two Inſects, is conſiderable. The colour of the Beetle is black; but when not damaged, is entirely covered with a rich bronze, partaking of a green and golden hue on the wing caſes, and a fine purple on the thorax: the underſide is plain black.

FIG.

FIG. III.

CARABUS GRANULATUS.

COLEOPTERA.

CARABUS.

SPECIFIC CHARACTER

AND

SYNONYMS.

Apterous, black, bronzed. Wing caſes ſtriated; three rows of elevated, or convexed-oblong ſpots, with an intermediate elevated line on each.

CARABUS GRANULATUS apterus nigricans elytris æneis ſtriatis interiectis punctis elevatis longitudinalibus.—*Lin. Syſt. Nat.*—*Fab. Ent. Syſt.* 1. 130. 28.

Carabus granulatus.—*Paykull Monogr.* 19. 9.
Degeer Inſ. 4. 88. 2.
Sulz. Hiſt. Inſ. tab. 7. *fig.* 2.
Schæff. Icon. tab. 18. *fig.* 6. & *tab.* 15. 6. *fig.* 1.

Some authors ſay, this ſpecies is very common in the fields near London. It is often found in Batterſea meadows; and we have not found it elſewhere.

PLATE

3
1
2

PLATE CCXXIII.

FIG. I.

PHALÆNA DERASA.

BUFF ARCHES MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Creſted. Wings deflexed. Anterior pair buff colour, with ſmall arched markings.

NOCTUA DERASA: criſtata, alis deflexis, anticis ſupra decorticatis: *Fab. Syſt. Ent.* 609 80.—*Spec. Inſ.* 2. 229. 103.—*Ent. Syſt.* 3. *p.* 2. 85. 250.
Phalæna deraſa. *Linn. Syſt. Nat.* 2. 851. 158.
Phalæna pyritoides. *Naturf.* 2. *tab.* 1. *fig.* 7. (*mas*).
Borkhauſen, *enr. Schmett.* 4. *T. n.* 281. *p.* 657.
Die Himbeereule. Der Wiſchflügel. *Panz. Faun. Inſ. Germ.*

A rare ſpecies, is found in the Fly ſtate early in Auguſt.

The larva of this phalæna is unknown to us, and has neither been figured or deſcribed in any of the entomological works recently publiſhed. The notes of Harris are not altogether ſatisfactory; he mentions the time of its changing from the caterpillar to the pupa, but has given no figure or deſcription of either. The entomologiſts of Germany, where the phalæna is not ſcarce, ſeem unacquainted with its metamorphoſis. Fabricius, the lateſt writer on the ſubject, has not deſcribed it.

FIG. II.

PHALÆNA TRAGOPOGINIS.

GOAT'S-BEARD MOTH.

LEPIDOPTERA.

PHALÆNA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Anterior wings dark brown, with three black points or ſpots in the centre, poſterior pair livid.

NOCTUA TRAGOGINIS: criſta, alis deflexis, anticis fuſcis, punctis nigris tribus approximatis, poſticis lividus. *Fab. Syſt. Ent.* 615. 107.—*Spec. Inſ.* 2. 237.—*Ent. Syſt.* 3. *p.* 2. 112. 336.

Phalæna Tragopoginis. *Lin. Syſt. Nat.* 2. 855. 177.—*Fn. Sv.* 1189.

Phalæna

Phalæna antennis filiformibus, alis deflexis fuſcis nitidis, punctis tribus centralibus nigris, capite flavo. *Degeer Inſ. Verſ. Germ.* 2. 1. 303. 10. *tab.* 7. *fig.* 15.

Found on the Goat's beard, Spinach, and Docks.—Our ſpecimen was taken in June.

FIG. III.

PHALÆNA LICHENES.

LIVER-WORT MOTH.

LEPIDOPTERA.

PHALÆNA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax creſted. Anterior wings green, with black marks. Poſterior pair brown. Underſide brown.

NOCTUA LICHENES: criſtata, alis deflexis: anticis viridibus, maculis variis atris, ſubtus fuſcis. *Fab. Syſt. Ent.* 614. 102.—*Spec. Inſ.* 2. 235. 127.—*Ent. Syſt.* 3. *p.* 2. *p.* 104. 312.

Noctua glandifera. *Wien. Verz.* 70. 2.

We have found this ſpecies againſt walls on which the *Lichen fuſco-ater* was growing. The larva is ſuppoſed to feed on plants of that genus. One ſpecimen was found in October, another early in the ſpring, from which we conclude there muſt be two broods of them in the year.

PLATE CCXXIV.

PHALÆNA NUPTA.

Red Underwing Moth.

Lepidoptera.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax creſted. Anterior wings greyiſh, varied with brown. Poſterior pair red, with two broad black waves acroſs. Abdomen hoary above, white beneath.

Phalæna Nupta criſtata alis planis cineraſcentibus: poſticis rubris; faſciis nigris, abdomine cano ſubtus albo. *Linn. Syſt. Nat.* 2. 841. 119.
Wilks pap. 33. *tab.* 1. *a.* 1.
Roeſ. Inſ. 1. *phal.* 2. *tab.* 15.

The larva of the Red Underwing Moth feeds on the willow: it is found in that ſtate in June and July. The Fly appears in Auguſt, after having remained in the pupa ſtate about twenty-one days.

Collectors of Engliſh Inſects enumerate near twenty ſpecies of Phalæna under the trivial diſtinctions of *yellow underwing*, *copper underwing*, *orange underwing*, *pink underwing*, &c. &c. Among theſe the moſt conſpicuous both for beauty and magnitude, are the *red underwing*, and *crimſon underwing*. The firſt is by no means uncommon in the winged ſtate. The latter is very rare, or at leaſt a local ſpecies: it is found in the larva ſtate on the tops of the higheſt oaks in Richmond Park, and was formerly found in ſimilar ſituations in Burnt Wood, Eſſex. We are not informed that it has been taken in any other part of this kingdom.

Theſe two ſpecies have been confounded with a third ſort that is found in ſome parts of Europe, but does not, we have every reaſon to conclude, inhabit this country. This is the *Noctua Pacta* of Linnæus and Fabricius. Linnæus himſelf, in the firſt editions of the Syſtema Natura, conſidered the Red Underwing Moth, figured by Roeſel, tab. 15, as the Phalæna Pacta, and adds it in his Synonyms; but it appears corrected in the later editions *.

After that time, Harris, in his Aurelian, and other works, called the *Red Underwing* Phalæna Pacta, and the *Crimſon Underwing* Phalæna Nupta. And Dr. Berkenhout, following Harris, or inattentive to the expreſs language of the author he tranſlated, has made the ſame error in his Synopſis of the Natural Hiſtory of Great Britain †. Indeed, it may be doubted, whether any later Engliſh work on Inſects has detected the error; for, examining a little tract of Mr. Matthew Martin, of the Bath Society, publiſhed in 1785, we find the Red Underwing called therein *Phalæna Pacta*.

To place our remarks in a clear point of view, we need only quote the deſcriptions of Linnæus:—"NOCTUA PACTA Criſtata alis griſeſcentibus ſubundatis: poſticis rubris; faſciis duabus nigris. *Abdomine ſupra rubro.*" And again in the general deſcription:

* Corrected after 1759.

† Not corrected in the laſt edition.

"*Abdomen*

" *Abdomen ſupra roſeum.*" Without adverting to the other characteriſtic marks, this proves that the Linnæan ſpecies of *Pacta* cannot be the ſame with that of the authors before quoted, becauſe in their ſpecies the upper part of the abdomen is hoary, inclining to brown, and not red *. Their Phalæna Pacta can be no other than the Phalæna Nupta of Linnæus and Fabricius; the preciſe ſpecies repreſented in our plate; of which Linnæus and Fabricius ſay: " Habitat in Europæ Salice Vitellina;" and of the Phalæna Pacta and Sponſa, " Habitat in Europæ Quercu." The firſt lives on willows, the two others on oaks.

We cloſe our remarks with obſerving, that the above quoted Engliſh authors have been no leſs miſtaken as to Phalæna Nupta, which they have made the Crimſon Underwing Moth. We have before expreſſed our doubt whether Phalæna Pacta has ever been found in this country;—we add, that the Inſect, known to Engliſh collectors by the trivial name of Crimſon Underwing, is the *Phalæna Sponſa* of Linnæus and Fabricius †, and conſequently not connected in the leaſt with Phalæna Nupta.

The readers of the works of Harris, Berkenhout, &c. are requeſted to *read*

For Phalæna Nupta, Phalæna Sponſa, Crimſon Underwing Moth.

For Phalæna Pacta, Phalæna Nupta, Willow Red Underwing Moth.

And finally, remove Phalæna Pacta from the liſt of Britiſh ſpecies, till it is proved to be a native of this country.

---

* Berkenhout ſays the abdomen is reddiſh above; but by this he only encreaſes the miſtake; for his ſpecies agrees in every other reſpect with the Willow Moth, on whic plant he alſo ſays it is found. Page 140. Vol. 1.

† Vide Entomologia Syſtematica. Vol. III. p. 2. p. 53. 147.

PLATE CCXXV.

SIREX SPECTRUM.

Black-bodied Tailed Wasp.

Hymenoptera.

Wings four, membraneous in general. Tail of the females armed with a ſting.

GENERIC CHARACTER.

Mouth armed with ſtrong jaws. Palpi two, truncated. Antennæ filiform, containing upwards of twenty-four articulations. Sting projected, ſtrong, and ſerrated.

SPECIFIC CHARACTER

AND

SYNONYMS.

Abdomen black. Thorax rather hairy, a yellow ſtripe on each ſide, next the baſe of the wing.

Sirex Spectrum: abdomine atro, thorace villoſo, litura ante alas lutea. *Fab. Syſt. Ent.* 3. 26.—*Spec. Inſ.* 1. *p.* 419. 109. 6.

Sirex ſpectrum. *Lin. Syſt. Nat.* 2. 929. 3.—*Fn. Sv.* 1574.—*Degeer. Inſ.* 1. *tab.* 36. *fig.* 6.—*Schæff. Icon. tab.* 4. *fig.* 9. 10.

This ſpecies bears much reſemblance to ſome Inſects of the Ichneumon genus. We have found it among the leaves of the Horſeradiſh in June.

All the *ſirices* are rare in England. Sirex ſpectrum is an active and vigorous creature, and which cannot be taken without danger of its ſtinging. The ſting is ſmall, and fine as a needle, but formed of ſuch hard or horny ſubſtance, that it will pierce the finger to the bone.

UNIVERSITY
MA USA

PLATE CCXXVI.

VESPA VULGARIS.

Common Wasp.

Hymenoptera.

Wings 4, membranous in general. Tail of the female armed with a ſting.

GENERIC CHARACTER.

Mouth armed with jaws. The ſting ſharp-pointed and concealed within the abdomen. Body ſmooth, without hair. The upper wings folded.

SPECIFIC CHARACTER

AND

SYNONYMS.

A yellow line on each ſide of the thorax: four yellow ſpots on the ſcutellum, a black belt, and two black ſpots on each ſegment of the abdomen.

Vespa Vulgaris: thorace utrinque lineola interrupta, Scutello qua quadrimaculato, abdominis inciſuris punctis nigris diſtinctis. *Fab. Syſt. Ent.* 364. 9.—*Spec. Inſ.* 1. 460. 9.—*Lin. Syſt. Nat.* 2. 949. 4.—*Fn. Sv.* 1671.

Veſpa nigra luteaque, antennis totis nigris. *Degeer Inſ.* 2. 2. 111. *tab.* 26. *fig.* 7.

Veſpa thorace lineolis trium parium differentium flauves centium. *Geoff. Inſ.* 2. 369. 2.

Schæff.

Schæff. Elem. tab. 130.
—— *Icon. tab.* 35. *fig.* 4.
Reaum Inſ. 6. *tab.* 12. *fig.* 7. 8.

Moſt kinds of Waſps live in ſocieties; and, like the bees, conſtruct combs, in which they depoſit their eggs, and rear their young. Some ſpecies are ſolitary, and each individual forms a neſt for itſelf.

The common Waſp lives in ſocieties: they collect the juices of fruits, inſects, &c. and make honey, but it is inferior to that of bees. The metamorphoſis of the waſps and bees are ſimilar.

HARVARD UNIVERSITY
CAMBRIDGE, MA USA

PLATE CCXXVII.

PHALÆNA MONACHA.

Black Arches Moth.

Lepidoptera.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings deflexed, white, with black arches. Abdomen red.

Phalæna Monacha: alis deflexis albis atro undatis, abdominis inciſuris ſanguineis. *Lin. Syſt. Nat.* 2. 821. 43.—*Fn. Sv.* 1130.—*Fab. Ent. Syſt. T.* 3. *p.* 1. 446. 119. *Wien. Verz.* 52. 5. *Wilks pap.* 19. *tab.* 3. *a.* 4. *Schæff. Icon. tab.* 68. *fig.* 2, 3.

We have in few inſtances been able to preſent a ſpecies of Phalæna, with all its metamorphoſis, more deſerving attention than the Black Arches Moth. It is uncommonly rare in the winged ſtate, and its larva and pupa is, we preſume, unknown to the Engliſh Entomologiſts at this time. We imagine Harris met with, and bred this

this Inſect, though he has not figured it: he ſays it fed on the Oak, that it changed into chryſalis June 9th, and appeared in the winged ſtate July 9th, which is very near the time of our ſpecimen changing.

The larva is rather a general feeder; for though Harris mentions only Oak, we found that it would not refuſe the leaves of fruit-trees, ſuch as Apples, Pears, &c.; it feeds alſo on the Willow and Sallow. The female is larger than the male, and has antennæ like briſtles.

PLATE CCXXVIII.

SPHINX CONVOLVULI.

Bind-Weed Hawk Moth.

Lepidoptera.

GENERIC CHARACTER.

Antennæ thickeſt in the middle. Wings, when at reſt, deflexed. Fly ſlow, morning and evening only.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire, clouded. Poſterior pair marked with zigzag tranſverſe bands. Abdomen belted with alternate marks of red, black and white.

Sphinx Convolvuli: alis integris nebuloſis: poſticis ſubfaſciatis, abdomine cingulis rubris atris albiſque. *Linn. Syſt. Nat.* 2. 798. 6.—*Fab. Ent. Syſt. I.* 2. *p.* 1. 374. 54.
Geoff. In. 2. 86. 9.
Roeſ. Phal. 1. *tab.* 7.
Sepp. Inſ. 3. 19. *tab.* 4.
Merian. Europ. 39. *tab.* 75. *fig.* 2.
Cramer Inſ. 19. *tab.* 225. *fig. D.*
Welks pap. 10. *tab.* 1. 6. 2.
Eſp. Inſ. 2. *tab.* 5.
Drury Inſ. 1. *tab.* 25. *fig.* 4.

This

This is the largeſt of the Hawk Moths that inhabits Great-Britain, except *Sphinx liguſtri* and *Sphinx Atropos*. It is rarely taken in this country; the curious in Engliſh Inſects have them from Germany, where they are more common than with us.

A beautiful variety of this Inſect is found in North-America: the wings are more richly varied with different ſhades of bright browns than the European kind; the poſterior wings are of a fine roſe-colour. It has all the characteriſtic marks of Sphinx Convolvuli, or we ſhould heſitate to admit it as the ſame ſpecies. We received it from Mr. Abbot, in whoſe folio work it is alſo figured; he found it on the Wild Vine. Mr. Drury had the ſame variety ſent to him from St. Chriſtopher's.

PLATE CCXXIX.

THE LARVA AND PUPA OF SPHINX CONVOLVULI, OR BIND WEED HAWK MOTH.

After much reſearch, we have not been ſo fortunate as to meet with the Larva of this rare Inſect; nor can we learn that it has been taken by any Collector of Engliſh Inſects for many years. In the winged ſtate one Specimen was ſaid to be taken in the fields near Hoxton about two years ago.

To perfect the Hiſtory of this ſpecies, we have copied the Figures of the Caterpillar and Pupa, from N° 7, *Der Nacht-Voegel*, &c. &c. of Roeſel's *Inſecten Beluſtigung*, Vol. I.

Our readers will obſerve that the Fly produced from the Caterpillars repreſented by Roeſel is nearly one-third larger than the ſpecimens ſuppoſed to be bred in England; the Caterpillars muſt therefore be larger in the ſame proportion in the ſpecimens found in Germany.—The Caterpillars are of two colours, one green with ſtripes of yellow and ſpots of black; The other dull brown with ochre coloured ſtripes, and ſides of the ſame. The Caterpillar figured by Abbot has a roſe-coloured band on the ſide.

2

1

2

PLATE CCXXX.

FIG. I.

PHALÆNA MAURA.

Old Lady Moth.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax creſted, Wings incumbent, exterior margins dentated, aſh-colour, varied with large ſpaces of black. On the underſide a deep whitiſh border.

Noctua Maura criſtata, alis incumbentibus dentatis, cinereo nigroque variis, ſubtus margine albo. *Fab. Syſt. Ent.* 604. 61.—*Spec. Inſ.* 2. 224. 81.—*Ent. Syſt.* 3. p. 2. 63. 174.

Phalæna maura ſpirilinguis criſtata, alis depreſſis dentatis, faſciis duabus nigris, inferioribus nigris, faſcia alba. *Linn. Syſt. Nat.* 2. 843. 124.

Phalæna Lemur *Naturf.* 6. *tab.* 5. *fig.* 1.
Shœff. Icon. tab. 1. *fig.* 5. 6.

This grave Moth appears in the month of Auguſt: it frequents old houſes in evenings.—From its dingy appearance it is uſually called the Old Lady.

FIG. II.

PHALÆNA LUCIPARA.

Scarce Angle Shades Moth.

LEPIDOPTERA.

PHALÆNA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Creſted. Wings deflexed, greyiſh, with angular dark marks. An angular light coloured ſpace on the exterior part of the Wing, and a pale band acroſs the middle of each.

Noctua Lucipara criſtata, alis deflexis cinereo nitidis, faſcia media lata fuſca. *Fab. Spe. Inſ.* 2. 233. 121.—*Ent. Syſt.* 3. *p.* 2. *p.* 99. 244.

Phalæna lucipara ſpirilinguis criſtata, alis purpuraſcentibus lucidis, faſcia nigra, ſtigmate poſtico flavo. *Linn. Syſt. Nat.* 2. 857. 187.—*Fn. Sv.* 1201.

The common Angle-ſhades Moth, (*Phalæna Meticuloſa*) is figured in a former part of this Work. Phalæna Lucipara is an Inſect nearly allied to it, but is far more ſcarce; we have only met with the Specimen figured in the annexed Plate.—The Larva is ſuppoſed to feed on the internal ſubſtance of Willows. The Fly has alſo been obſerved among thoſe trees.

PLATE

1

3

4

1

3

4

2

PLATE CCXXXI.

FIG. I. I.

ATTELABUS APIARIUS.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ thickeſt towards the apex. Head protruded, broad, tapering towards the thorax. Four joints in each foot.

SPECIFIC CHARACTER

AND

SYNONYMS.

Bright blue: rather hairy. Wing caſes red, with three bars of blue: the third, at the termination of the apex.

ATTELABUS APIARIUS: *Lin. Syſt. Nat.* 2. 620. 10.

CLERUS APIARIUS: ſubnudus cyaneus elytris rubris: faſciis tribus cœruleſcentibus: tertia terminali.—*Geoff. Inſ.* 1. 304. 1. *tab.* 5. *fig.* 4.—*Fab. Ent. Syſt.* 1. 209. 14. *Degeer. Inſ.* 5. 157. 1. *tab.* 5. *fig.* 3. *Sulz. Inſ. tab.* 4. *fig.* 6.

A very local ſpecies: we learn that it has been found near Mancheſter.

FIG. II.

ATTELABUS FORMICARIUS.

SPECIFIC CHARACTER

AND

SYNONYMS.

Black. Thorax red. Wing caſes, with two bars of white: baſe red.

ATTELABUS FORMICARIUS: *Linn. Syſt. Nat.* 2. 620. 8.
Clerus formicarius. *Fab. Ent. Syſt.* 1. *p.* 207. 27. 5.
—— niger thorace rufo, elytris faſcia duplici alba baſique rubris. *Degeer. Inſ.* 5. 160. 3. *t.* 5. *f.* 8.

Only a few ſpecies of this genus have been diſcovered in this country; and neither of thoſe are very common. We apprehend Attelabus Formicarius is rare, having only met with one ſpecimen of it. It was found in May, on a ſand-bank, near Coome Wood, Surry.

FIG. III. III.

DERMESTES PELLIO.

GENERIC CHARACTER.

Antennæ terminated in a perfoliated club: the three extreme articulations thicker than the reſt. Thorax convex: ſcarcely margined. Head bent in; and almoſt concealed under the thorax.

SPECIFIC

SPECIFIC CHARACTER

AND

SYNONYMS.

Black. A white ſpot on each wing-caſe.

DERMESTES PELLIO: niger elytris puncto albo. *Lin. Syſt. Nat.* 2. 563.—*Fn. Sv.* 411.

DERMESTES PELLIO. *Fab. Ent. Syſt.* 1. *p.* 228. 5. *Oliv. Inſ.* 2. 9. 11. 10. *tab.* 2. *fig.* 11. *Schæff. Icon. tab.* 42. *fig.* 4.

A very common and deſtructive creature. It inſinuates itſelf into all kinds of fur, or the dried ſkins of animals; and in the ſtate of larva, injures them conſiderably. The larvæ of this tribe of Inſects are numerous where they are ſuffered to breed: they enter into and deſtroy furniture, cloathing, and even food. Some ſpecies are found upon the carcaſes of animals; while others, more tenacious of life, penetrate harder ſubſtances, and reſiſt the camphor, verdigreaſe, muſk, arſenic, and other drying or corroding ſubſtances, that prevent the depredations of moſt Inſects. One or two ſpecies are in particular much to be dreaded by Collectors of Natural Curioſities: they perforate the cabinet, or caſe, and when the larva is hatched, effect their deſtruction. In collections of animals, birds, inſects, and plants, they do great miſchief.

FIG IV. IV.

DERMESTES SCARABÆOIDES.

SPECIFIC CHARACTER

AND

SYNONYMS.

Ovated. Black. Two red ſpots on the wing-caſes.

DERMESTES SCARABÆOIDES. *Linn. Syſt. Nat.* 2. 563. 17.—*Fn. Sv.* 428.

SPHÆRIDIUM SCARABÆOIDES: ovatum atrum elytris maculis duabus ferrugineis. *Fab. Ent. Syſt.* 1. 77. 6. 1.

Found in dung. Fabricius ſeparates this ſpecies from the Dermeſtides, and places it in a new genus *Sphæridium*.

PLATE CCXXXII.

PHALÆNA QUERCIFOLIA.

LAPPET MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings, in general, deflexed when at reſt. Fly by night.

Bombyx—Alis reverſis.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings reverſed, ſcalloped, red brown, with tranſverſe waved lines.

PHALÆNA QUERCIFOLIA: alis reverſis dentatis ferrugineis, ore tibiiſque nigris. *Linn. Syſt. Nat.* 2. 812. 18. *Fn. Sv.* 1110.

BOMBYX QUERCIFOLIA. *Fab. Ent. Syſt. T.* 3. *p.* 1. 420. 42.
Roeſ. Inſ. 1, *Phal.* 2, *tab.* 41.
Schæff. Icon. tab. 71. *fig.* 45.
Merian Europ. tab. 1. *fig.* 3.
Reaum. Inſ. 2. *tab.* 23.
Sulz. Inſ. tab. 16. *fig.* 93.
Albin. Inſ. 1. *tab.* 16.

Phalæna

Phalæna Quercifolia is a rare and intereſting Inſect, and is the largeſt of the Engliſh bombyces, if we follow the arrangement of the *Entomologia Syſtematica* of Fabricius, and remove the Linnæan Bombyx Coſſus* to a new genus†.

The trivial name Lappet Moth has been given to this ſpecies by ſome early Collectors of Engliſh Inſects, becauſe they obſerved, when the creature was at reſt, and the wings expanded in a natural poſition, the anterior part of the ſecond pair *lapped* over the firſt, inſtead of the firſt pair laying on the ſecond, as in many other ſpecies of Phalæna. This appearance is very ſtriking, but not peculiar to Phalæna Quercifolia. *Bombyces*, with ſimilar reverſed wings, are numerous, and ſeveral of them natives of this country; as *Phal. Quercus*, and *Potatoria*.

In a former volume we have given The Pine Lappet Moth; an Inſect that is extremely uncommon in Great-Britain; that, with the preſent ſpecies, are the only two Britiſh Phalæna called Lappet Moths; another Inſect, cloſely allied to P. Quercifolia, and ſuppoſed to be the *Phal. Populifolia*, is ſaid to be an Engliſh Inſect, but on what authority, we are not informed. The very different appearances of the larva of Phal. Quercifolia in different ſtages of its growth, may poſſibly have cauſed ſome miſtake; for in one ſkin they are brown, with whitiſh marks; in another greyiſh, with dark brown marks; and when of a full ſize, are more inclined to brown and grey in ſome ſpecimens than in others. Notwithſtanding, however, the variation of colours, in all its changes, we find that the two oval blue marks on the ſecond and third ſegment of the body are conſtant, and ſufficient to determine the ſpecies. The larva of Bombyx Populifolia is very ſimilar to that of B. Quercifolia, when young, if we may judge by the only figure of it extant, but the mark acroſs the ſecond ſegment is narrow and black; that on the third ſegment broader, with two ſemi-lunated red ſpots.—*Vide Kleeman's Beytraege, &c. Vol.* 3. *tab.* 14.

---

* Goat Moth. † Coſſus ligniperda.—*Fab.*

The

The larva of P. Quercifolia we have taken in Darent Wood, Kent, on the grafs; it feeds alfo on Willow, Blackthorn, and Whitethorn. At the end of April, or not later than May, it forms a large and loofe fpinning interwoven with its hairs, of black, reddifh, and grey colours. The pupa is black, but appears perfectly white, being covered with a fine white pollen, or powder; each fegment is encircled by a belt, of a red colour. In July and Auguft it is found in the Fly ftate.

MCZ LIBRARY
ITY
CAMBRIDGE, MA USA

3
2
1
4

PLATE CCXXXIII.

PHALÆNA PRUNARIA.

PHOENIX MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly in the night.

Geometra.

SPECIFIC CHARACTER

AND

SYNONYMS.

Antennæ like a briſtle. Firſt pair of wings brown and grey, with two broad pale waved marks acroſs. Second pair, with waves on the poſterior part.

PHALÆNA PRUNARIA: ſeticornis alis griſeo fuſcis: faſciis duabus pallidis repandis: poſtica ſemiterminali. *Linn. Syſt. Nat.* 2. 869. 250.—*Fn. Sv.* 1267.—*Fab. Ent. Syſt.* 3. *p.* 2. *p.* 178. 175.
Wien. Verz. 113. 19.
Clerk. Phal. tab. 7. *fig.* 3.
Ammiral Inſ. tab. 23. *fig.* 1. 4.

Fabricius deſcribes the larva of this rare Moth:—It is aſh-coloured, with a black collar or mark on the neck: feet reddiſh brown, and the back ſpotted with the ſame colour.

The

The trivial Engliſh name, Phœnix Moth, has been given to this Inſect from a circumſtance little known, and ſcarcely deſerving notice, except as it proves the impropriety of naming Inſects from local circumſtances, when any other can be well applied. A ſmall part of a wood near London had been cut down, and a quantity of charcoal made on the ſpot. This place had been often viſited by Aurelians, but the Phalæna Prunaria had never been diſcovered there, nor indeed was then known as a Britiſh Inſect. On the following year, when the ground was cleared, and the underwood grown up, this Moth was found, it continued to be taken conſtantly in the months of June and July for many years, in this place, and then totally diſappeared. The late Mr. Bentley, known as a collector of Engliſh Inſects, diſcovered a breeding-place of this Moth on Epping Foreſt, and commonly found three or four ſpecimens every ſeaſon. We are not certain that it has been found in any other part of the kingdom. It feeds on the thorn, plumb and currant.

FIG. II. II.

PHALÆNA DUPLICATA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Firſt wings grey, with three tranſverſe waved lines.

PHALÆNA DUPLICATA: ſeticornis, alis griſeis, faſciis duabus trilineatis fuſcis. *Fab. Ent. Syſt.* 3. *p.* 2. *p.* 193. 234.

PHALÆNA PLAGIATA: ſeticornis, alis anticis canis: faſciis tribus trilineatis nigricantibus repandis. *Linn. Syſt. Nat.*—*Fn. Sv. p.* 334. *n.* 1271.

Phal.

Phal. Plagiata. Das doppelte Band. *Berlin. Mag.* 4. *B. p.* 522. *n.* 38.
Schæff. Icon. tab. 12. *fig.* 1. 2.
Clerk. Icon. tab. 6. *fig.* 1.
Roſſi Faun. Etr. T. 2. *p.* 194. *n.* 1170.

Found in June. It is rare, and we believe has not been met with in the ſtate of larva in this country. Foreign authors ſay the larva is brown, variegated with red, and has a yellow line on each ſide. *Kleemann* has not figured the larva with the Moth in his Supplement of the rare Inſects found in Germany.

FIG. III.

PHALÆNA VESPERTARIA.

SPECIFIC CHARACTER
AND
SYNONYMS.

Antennæ feathered. Wings yellowiſh: two dark waved ſtreaks acroſs the firſt pair; one on the ſecond pair: the ſpace between the ſtreaks and margins of the wings, dark.

PHALÆNA VESPERTARIA pectinicornis alis flaveſcentibus: ſtrigis duabus; poſteriore limbum obſcurum diſterminante.
Linn. Syſt. Nat. 2. 864. 224.
Fab. Ent. Syſt. 3. *p.* 2. 149. 74.
Phalæna parallelaria. *Wien. Verz.* 104. 15.

Found in Hornſey-Wood in July, and alſo in Norwood.

FIG.

FIG. IV.

PHALÆNA CHÆROPHYLLATA.

GREAT CHIMNEY-SWEEPER.

SPECIFIC CHARACTER

AND

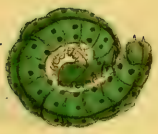
SYNONYMS.

Antennæ like a briſtle. Wings black erect: firſt pair white at the tips.

PHALÆNA CHÆROPHYLLATA ſeticornis atra alis erectis: anticis apice albis. *Linn. Syſt. Nat.* 866. 237.—*Fab. Ent. Syſt. I.* 3. *p.* 2. 184. 200.
Wien. Verz. 116. 1.

Appears in the Winged ſtate late in July. Is produced from a reen capillar, which feeds on *Cherophyllum Silveſtre*, or wild cicely.

PLATE



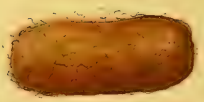


PLATE CCXXXIV.

TENTHREDO LUTEA.

Yellow Saw-Fly.

Hymenoptera.

Wings four, generally membraneous. Tail of the females armed with a ſting.

GENERIC CHARACTER.

Without proboſcis. Mouth armed with jaws. Sting compoſed of two laminæ, dentated, like a ſaw, and almoſt concealed within the abdomen. Two tubercles on the ſcutellum.

SPECIFIC CHARACTER

AND

SYNONYMS.

Antennæ clubbed, yellow. Abdomen yellow, except the ſecond ſegment, which is black.

Tenthredo lutea: antennis clavatis luteis, abdominis ſegmentis pleriſque flavis. *Linn. Syſt. Nat.* 2. 921. 3.—*Fn. Sv.* 1534.
Fab. Ent. Syſt. I. 2. *p.* 105. 138. 3.
Roeſ. Inſ. 2. *Veſp. tab.* 13.
Schæff. Icon. tab. 103. *fig.* 2. 3.
Degeer Inſ. 2. 2. 223. 7. *tab.* 33. *fig.* 8. 16.

Very uncommon in this country. The larva has been found on the Willow, but unleſs taken when ready to become a pupa, it is impoſſible to rear it to the winged ſtate. We are little acquainted with the peculiar habits of theſe Inſects, and cannot therefore feed them in a proper manner.

Moſt of the Tenthredines enſhroud themſelves in a net-work covering, and remain in the earth till the Fly burſt forth; others faſten the web againſt the branches of trees, or on the trunk near the earth. The habits of Tenthredo lutea are very ſimilar to thoſe of T. Vitellinæ; the winged Inſect appears in June.

MCZ LIBRARY
HARVARD UNIVERSITY
CAMBRIDGE, MA USA

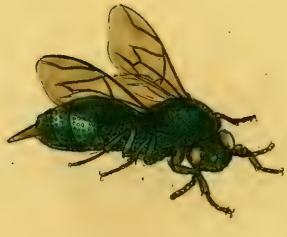


PLATE CCXXXV.

CHRYSIS CYANEA.

HYMENOPTERA.

Wings four: generally membraneous. Tail of the females armed with a ſting.

GENERIC CHARACTER.

No proboſcis. Armed with jaws. Antennæ filiform.

SPECIFIC CHARACTER

AND

SYNONYMS.

Very gloſſy blue green. End of the abdomen furniſhed with three teeth.

CHRYSIS CYANEA: glabra nitens thorace abdominiſque cœruleis, ano tridentato. *Linn. Syſt. Nat.* 2. 948. 5.—*Fn. Sv.* 1667.
Fab. Ent. Syſt. 2. 147. *p.* 243. 20.
Veſpa cœrulea nitens. *Geoff. Inſ.* 2. 484. 23.—*Schæff. Icon. tab.* 81. *fig.* 5.

The natural ſize of this Inſect is given at Fig. I. in the annexed plate. It is far inferior in beauty to either Chryſis ignita or bidentata, figured in the early part of this work; but as the genus is very limited, we have a given figure of this ſpecies. It is very abundant on all k nds of fruit-trees in the ſummer.

PLATE

1
2
1
2

PLATE CCXXXVI.

FIG. I. I.

PAPILIO CORYDON.

Chalk-hill Blue Butterfly.

GENERIC CHARACTER.

Antennæ clubbed. Wings erect when at reſt. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire, above ſilvery or pale blue, with a black margin. Beneath grey, with eye-ſhaped ſpots.

Hesperia Corydon: alis integris cœruleo argenteis: margine nigro, ſubtus cinereis: punctis ocellaribus, poſticis macula centrali alba. *Fab. Ent. Syſt.* 3. *p.* 1. *p.* 298. 133.

Papilio Corydon. *Wien. Verz.* 184. 10.

Papilio Corydon. *Eſp. pap. tab.* 33. *fig.* 4.

Papilio Tiphys. *Eſp. pap. tab.* 51. *fig.* 4.

Found on the chalk-hills between Dartford and Rocheſter; particularly on a long range of hillocks leading from Dartford to the wood of Darent. Hence the Butterfly has been called the Chalk-hill blue. We believe it has not been found in any other part near London. The larva is unknown, it appears in the winged ſtate, the firſt and ſecond week in July.

FIG. II. II.

PAPILIO LINEA.

SMALL SKIPPER BUTTERFLY.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire, brown, divaricated, margin black.—An oblique black mark on the anterior wings.

HESPERIA LINEA: alis integerrimis divaricatis fulvis: margine nigro. *Fab. Ent. Syſt.* 3. *p.* 1. 326.
PAPILIO LINEA. *Wien. Verz.* 159. 5.
PAPILIO THAUMAS. *Eſp. pap. tab.* 36. *fig.* 2. 3.
PAPILIO SYLVESTRIS. *Pod. Muſ.*

A very generally diffuſed ſpecies, but not common; it is ſimilar to the Papilio Sylvanus of Linnæus, or Heſperia Sylvanus of Fabricius, which is found in the greateſt abundance in the ſkirts of woods in ſummer. Its metamorphoſe is unknown.

MCZ LIBRARY
HARVARD UNIVERSITY
CAMBRIDGE, MA USA

PLATE CCXXXVII.

PHALÆNA BETULARIA.

Peppered Moth.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Antennæ feathered. Wings entirely white, ſpeckled with black; a black bar acroſs the thorax.

Phalæna Betularia: pectinicornis, alis omnibus albis, thorace faſcia nigra, antennis apice ſetaceis. *Linn. Syſt. Nat.* 2. 862. 217. *Fn. Sv.* 1287.
Fab. Spec. Inſ. 2. 252. 56.

Phalæna antennis pectinatis, alis horizontalibus albis nigro punctatis maculatiſque, thorace faſciato. *Degeer. Inſ. Verz. Germ.* 2. 1. 250. 1 *tab.* 5. *fig.* 18.
Ammiral. Inſ. tab. 21.
Schæff. Icon. tab. 88. *fig.* 4. 5.
Albin. Inſ. tab. 91, 92.
Kleman. Inſ. 1. *tab.* 39. *fig.* 6.

Found on the Lime, Willow, and Elm in the ſtate of Larva, changes to the Pupa in September; and the Moth appears in May. The Larva of this creature differ very much in their ſhades of colour; they are generally blackiſh or dark olive with a few obſcure red ſpots.

HARVARD UNIVERSITY
CAMBRIDGE, MA U.S.A.

1
1
2

PLATE CCXXXVIII.

FIG. I. I.

PAPILIO HYALE.

CLOUDED YELLOW BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clubbed. Wings erect when at reſt. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings rounded, yellow: an orange ſpot on the poſterior wings: beneath, a large ſilver ſpot, with a ſmall contiguous ſpot of the ſame.

PAPILIO HYALE: alis rotundatis flavis: poſticis macula fulva; ſubtus puncto ſeſquialtero argentes. *Linn. Syſt. Nat.* 2. 764. 100.

Though we cannot but admire the Linnæan definitions, for their perſpicuity in general; we muſt in ſome inſtances blame him for that inattention which has betrayed ſucceeding naturaliſts into errors,

and even abſurdities. The force of this remark, however harſh it may appear, will apply in a particular degree to the ſpecific definition and quoted Synonyms of Papilio Hyale, and conſequently to two other ſimilar ſpecies involved in the ſame error.

Linnæus gave the deſcription of Papilio Hyale, as above quoted in the Syſtema Natura, from an inſect in his own cabinet, and quotes, in the Synonyms, the Butterfly figured by *Roeſel*, *Vol.* 3. *tab.* 46. *fig.* 4. 5. The works of that author being known in every part of Europe, the entomologiſts of that time received the figure as that of the true Hyale; and relying on the accuracy of the Linnæan references, the miſtake has been overlooked to the preſent period. Fabricius, who is the lateſt ſyſtematic writer on this ſcience, quotes the figures in Roeſel, as Linnæus had himſelf in the firſt inſtance; and he alſo refers to figures of the ſame inſect in the works of Cramer and Schæffer. An error of ſuch ſpecious appearance could only be detected by a reference to the ſpecimen in the Linnæan Cabinet, at this time in the poſſeſſion of Dr. Smith, and by this it appears that every author has miſtaken the ſpecies of Linnæus, and that Linnæus was himſelf miſtaken in ſuppoſing the inſect deſcribed was the ſame as that figured by Roeſel, and to which he refers: that the Linnæan *Papilio Hyale* is what later authors have conſidered *Papilio Palæno*, and that the true *Papilio Palæno* is not a Britiſh ſpecies.

Theſe errors are ſo complicated that we muſt examine the characters aſſigned to each ſpecies with the utmoſt attention, and we ſhall then find his deſcriptions correct, but the ſynonyms erroneous. Papilio Hyale is deſcribed with *yellow wings*; the colour of the wings in the ſuppoſed Hyale is not of that kind which Linnæus would have called yellow, *(flavis,)* but *fulvis*, being of a deep orange colour, much inclining to red. Either of theſe expreſſions will certainly admit of great latitude, but we muſt not therefore confound one with the other. The two ſilver ſpots are not conſtant, though it forms a part of the ſpecific character; we have ſeen in both the clouded yellow and clouded orange butterflies, ſometimes only one ſpot, though in general it has two. On the whole, the Linnæan deſcrip-

deſcription of *Papilio Hyale* ſeems to agree with the fictitious *P. Palæno* of our collections, and the ſpecimen in the Linnæan cabinet places it beyond conjecture.

Fabricius has not attended to the errors of former authors on this ſubject; even in his laſt work, *Syſt. Ent.* he adds to the ſpecific deſcription of his P. Hyale, Mas margine alarum nigro immaculato, fœmina maculato*, by this it is evident he alludes to the clouded orange, for it is not ſo in the Linnæan inſect; the broad bar of black being conſtantly ſpotted in both ſexes. We have alſo obſerved that the rare variety with white wings is only the female; that which is yellow is the male: the ſame is obſerved alſo of Papilio Rhamni, or Brimſtone Butterfly; and as the males of all inſects are more abundant than the females, and the males of P. Hyale are rare, the variety, or ſex with white wings muſt be extremely ſo. Theſe have been taken in a clover field in the month of Auguſt, in company with the clouded orange.

It may be proper to cloſe this deſcription with a few obſervations on the true Papilio Palæno, as the ſubject before us has hitherto paſſed under that name. Linnæus ſays, alis integerrimis flavis apice nigris margineque fulvis: poſticis ſubtus puncto argenteo; this does not agree with, or at leaſt expreſs the Inſect generally called Palæno, and the ſpecimen in the Linnæan cabinet proves it to be a different ſpecies; the P. Palæno has no yellow ſpots on the black margins of the wings, and the ſpot in the center of the anterior pair is ſmall and ſhaped like a ſhuttle; its native place is unknown. A variety of the pale clouded yellow is found in America, and by miſtake is ſometimes placed in cabinets as a Britiſh ſpecies.

* The wings in the males have a broad black bar on the exterior margin; in the female the bars are ſpotted.

FIG. II.

PAPILIO EDUSA.

CLOUDED ORANGE BUTTERFLY.

LEPIDOPTERA.

PAPILIO.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire, fulvous, or orange, with a black ſpot and margin of the ſame colour. On the under ſide greeniſh; a black ſpot on the anterior wings; ſilver on the poſterior wings.

PAPILIO EDUSA: alis integerrimis fulvis: puncto margineque nigris, ſubtus vireſcentibus: anticis puncto nigro, poſticis argenteo. *Fab. Ent. Syſt.* 3. *p.* 2. 206. 643.

If our obſervations on the preceding ſpecies are ſatisfactory and concluſive, the Inſect before us muſt be a diſtinct ſpecies, and not the true P. Hyale, for which it has ever been received. This involves another intereſting conſideration, for Linnæus muſt have been acquainted with this ſpecies, as he refers to figures of it in ſeveral Authors. It is probable he conſidered it as a variety, for it does not appear under another name in any part of his Writings.

Fabricius

Fabricus has deſcribed a new ſpecies of butterfly, under the name *Eduſa*, in his laſt work *Ent. Syſt.* which ſeems to agree with our inſect, and we are confirmed in our opinion by Mr. Jones of Chelſea, who aſſiſted Fabricius with conſiderable information, and aſſures us it is certainly the P. Eduſa of that author.

In a former part of this work we have given the male of this inſect as P. Hyale: the annexed figure repreſents the female, having large yellow ſpots in the black border of the wings. Both this and the preceding ſpecies are figured by Eſper, in the *Papiliones de l'Europe*; and by *Schæffer*, in the *Icones Rabiſbon*, &c.

[illegible] LIBRARY
[illegible] UNIVERSITY
[illegible] VA USA

2
1
1

PLATE CCXXXIX.

FIG. I.

PHALÆNA TREPIDA?

SWALLOW PROMINENT MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings deflexed; a prominence on the back. Anterior wings pale in the middle; brown next the margin; ſtreaked. A ſpot in the center of the wing.

BOMBYX TREPIDA: alis deflexis dorſo unidentatis: puncto medio ocellari ſtrigaque poſtica maculari fuſcis. *Fab. Ent. Syſt.* 3. *p.* 1. 449. 130.

Bombyx tremula. *Wien. Verz.* 49. 4.

The Swallow Prominent Moth is ſcarce, the larva is ſuppoſed to live under the bark of willows, but it is more certain that the Moth is ſeldom found, except among thoſe trees. In the day-time it has been ſeen againſt the trunk of trees, in the manner repreſented in the Plate.

We quote the authority of Fabricius with diffidence; his character is ambiguous; and can only be defined by the very general deſcription he has added to it.

FIG.

FIG. II.

PHALÆNA COMPRESSA.

LEPIDOPTERA.

BOMBYX.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings compreſſed; white, with a large brown mark continued acroſs the anterior Wings; grey in the middle, with ſeveral lunar white marks.

BOMBYX COMPRESSA: alis compreſſo adſcendentibus niveis: macula communi fuſca, centrali griſea: lunula alba. *Fab. Ent. Syſt.* 3. *p.* 2. 455. 149.

Phalæna ſpinula. *Wien. Verz.* 64. 6.
Panz. Faun. Germ. 1. *tab.* 6.

Not very uncommon in the month of June; it is called the Gooſe-egg Moth.

PLATE CCXL.

MELOE TECTA.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ moniliform, extreme articulation oblong. Thorax roundiſh. Elytra ſoft and flexible. Head inflected and gibbous.

SPECIFIC CHARACTER

AND

SYNONYMS.

Black. Wing-caſes nearly the length of the Abdomen. Antennæ thickeſt in the middle.

MELOE TECTA: atra, elytris abdomine haud brevioribus, antennis medio craſſiſſimis. *Panz. Faun. Inſ. Germ.*

Der Maywurmkäfer mit ungewöhalich langen Flügeldecken.—*Panz. Ibid.*

This is a rare Inſect, and has not been deſcribed by Linnæus or Fabricius. It bears a diſtant reſemblance to *Meloe Proſcarabæus*; but the ſingular ſtructure of the Antennæ will alone prove it a diſtinct ſpecies. The Antennæ in Meloe Proſcarabæus are moniliform, or compoſed of ſeveral bead-like articulations, nearly of the ſame ſize: thoſe of this new ſpecies are thickeſt in the middle; and in one point of view the fourth, fifth, and ſixth articulations appear remarkably large and globular: in another, they ſeem writhed or diſtorted, and very concave; the other joints are as in the former ſpecies.—The whole Inſect has a ſhining blue gloſs: Meloe Proſcarabæus

ſcarabæus is coal black. It is ſmaller, and the Wing-caſes nearly cover the Abdomen. In Meloe Proſcarabæus the wing-caſes are only one-third the length of the Abdomen.

In ſome Cabinets, this Inſect is arranged with a new ſpecific name *autumnalis*; but as we find it is not a non-deſcript, we prefer that, under which it has been already deſcribed. In this we not only avoid the confuſion ariſing from a change of names, but reject one merely local for another expreſſive of its ſpecific character.

Our Specimens were found on Epping Foreſt, in July.

PLATE CCXLI.

SPHINX POPULI.

POPLAR HAWK MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thickeſt in the middle. Wings, when at reſt deflexed. Fly ſlow, morning and evening only.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings reverſed, dentated, grey: a white central ſpot on the anterior Wings. Poſterior Wings red at the baſe.

SPHINX POPULI: Alis dentatis reverſis griſeis: anticis puncto albo, poſticis baſi ferrugineis. *Linn. Syſt. Nat.* 2. 797. 2.—*Fn. Sv.* 1084.
Roeſ. Inſ. 3. *tab.* 30.
Schæff. Icon. tab. 100.
Degeer. Inſ. 1. *tab.* 8. *fig.* 5.
Sepp. Inſ. 3. 3. *tab.* 1.
Albin. Inſ. tab. 38. *fig.* C.
Wilks pap. 11. *tab.* B. C.

This beautiful Inſect is very common in this country, and not leſs ſo in every other part of Europe: it feeds on the poplar and willow

willow in the larva ſtate, and frequents thoſe trees in the winged ſtate alſo. About the month of September, the Larva or Caterpillars are full grown, and change to the Pupa: the Sphinx appears in May.

2
1
1

PLATE CCXLII.

PAPILIO CINXIA.

PLANTAIN FRITILLARY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clubbed at the end. Wings erect, when at reſt. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings dentated, brown, with black marks: beneath fulvous, with three whitiſh bands acroſs the lower Wings, marked with black ſpots.

PAPILIO CINXIA: Alis dentatis fulvis nigro maculatis: poſticis ſubtus faſciis tribus albidis nigro maculatis. *Linn. Syſt.* 2. 784. 205.—*Sv.* 1063.
Fab. Ent. Syſt. 3. *p.* 2. 250. 779.
Roeſ. Inſ. 4. *tab.* 13. *fig.* 4. 5.
Geoff. Inſ. 2. 45. 12.
Wilks' pap. 58. *tab.* 3. *a* 8.
Eſp. pap. 1. *tab.* 16. *fig.* 2.
Schæff. Icon. tab. 204. *fig.* 1, 2.

ß. Papilio Delia, alis dentatis fulvo nigroque variis: poſticis ſupra punctis quatuor ocellaribus, ſubtus albis: faſciis duabus fulvis; poſteriore nigro punctata. *Linn. Fab.* Papilio Delia. *Wien. Verz.* 179. 6.

The Larva are black, beſet with ſpines and tufts of the ſame colour: the ſides are marked with a double row of white ſpots, the feet red. It is found on the long plantain in April. The Flies appear in May. This is the rareſt of the Britiſh Fritillary Butterflies, if we except Papilio Lathonia, the Queen of Spain Butterfly.

FIG. II.

PAPILIO LUCINA.

DUKE OF BURGUNDY FRITILLARY.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings indented, dark brown with bright yellowiſh-brown ſpots. Two rows of white ſpots on the underſide of the poſterior wings.

PAPILIO LUCINA: Alis dentatis fuſcis teſtaceo maculatis: ſubtus faſciis duabus macularum albidarum. *Linn. Syſt. Nat.* 2. 784. 203.—*Fn. Sv.* 1001.
Fab. Ent. Syſt. 3. *p.* 1. 250. 778.
Raj. Inſ. 122. 12.
Schæff. Icon. tab. 172. *fig.* 1. 2.
Petiv. Gazoph. tab. 16. *fig.* 10.

This pretty Inſect is found in the winged ſtate in May; the Larva is unknown.—Taken in Hornſey wood.

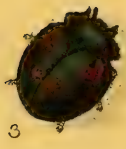
PLATE

2

2

3

1



3

1

PLATE CCXLIII.

FIG. I. I.

COCCINELLA 14 GUTTATA.

GENERIC CHARACTER.

Antennæ ſubclavated, truncated. Palpi club-formed, extreme articulation heart-ſhaped. Body hemiſpherical. Thorax and elytra margined.

SPECIFIC CHARACTER

AND

SYNONYMS.

Red, with fourteen white ſpots.

COCCINELLA 14 GUTTATA: coleoptris rubris, punctis albis quatuordecim. *Linn. Faun. Suec.* 492. *Syſt. Nat. p.* 583. *n.* 34. *Fab. Ent. Syſt.* 1. *p.* 284. *n.* 85.

This ſpecies is rather of a brown than red colour, as deſcribed by Linnæus. It is probably an uncommon Inſect. The ſmalleſt figure 1 is the natural ſize.

FIG. II. II.

COCCINELLA ANNULATA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Red. An oblong black ring acroſs the wing-caſes.

COCCINELLA ANNULATA: coleoptris rubris, macula ſubannulari nigra. *Linn. Syſt. Nat.* p. 579. *n.* 5. *Fab. Ent. Syſt.* 1. *p.* 268. *n.* 14.

Not a very common ſpecies.

FIG. III. III.

COCCINELLA CASSIDOIDES.

SPECIFIC CHARACTER.

Black with a red lunular mark, and a round ſpot of the ſame colour, on each of the wing-caſes. Margin prominent.

COCCINELLA CASSOIDES: elytris nigris, lunulâ punctoque rubris, margine prominulo. *Marſham MS.*

This is a nondeſcript Inſect. It was found in May.

PLATE

PLATE CCXLIV.

PAPILIO CAMILLA.

White Admirable.

GENERIC CHARACTER.

Antennæ clubbed at the end. Wings erect, when at reſt. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings dentated. Above, uniform dark brown, with a white band, and ſpots. Inner angle of the poſterior wings red.

Papilio Camilla: alis dentatis fuſcis ſubconcoloribus albo faſciatis maculatiſque, angulo ani rubro. *Linn. Syſt. Nat.* 2. 781. 187. *Roeſ.* 3. *tab.* 33. *fig.* 3. 4.

The White Admirable Butterfly feeds upon the common honeyſuckle or woodbine, and is found in the winged ſtate in the months of June and July, in the ſkirts of woods; its habit is much the ſame as that of P. Atalanta, Red Admirable, but it is by no means ſo common.

This ſpecies has hitherto been deemed the Papilio Camilla of Linnæus, though it differs in a ſlight degree from the deſcriptions and figures of authors who deſcribe only German or Swediſh ſpecimens of it. In the late editions of the *Syſtema Naturæ*, P. Camilla is deſcribed with P. Sibilla, a Papilio nearly allied to it, but which Linnæus conſidered as a diſtinct ſpecies; his deſcription of *Camilla* expreſsly ſaying "angulo ani rubro."—The angulis ani, of P. Sibilla*, not being of a red colour, removes it from the Engliſh ſpecies.

Fabricius is of a different opinion, and in diſſenting from his authority it is incumbent to ſtate our objections. In the *Species inſectorum* of that author, the P. Camilla with the Linnæan ſpecific character, is made a variety β of Sibilla. The ſynonyms of the two inſects are ambiguous, and the references not more ſatisfactory. Among others he refers for P. Sibilla, *to Drury's Inſ.* 2. *tab.* 16. *fig.* 1, 2,—*to Roeſel Inſ.* 3. *tab.* 70. *fig.* 1, 2, 3,—*and to Schæffer* 152†. *fig.* 1, 2. The two laſt are perhaps the ſame ſpecies: the firſt is unqueſtionably different. For *P. Camilla* he refers to *Roeſel tab.* 33. *fig.* 3, and this agrees with our ſpecimen, except in the colours of the upper ſurface being ſomewhat paler; ſo that we may conclude our Engliſh Inſect is not only the P. Camilla of Linnæus but alſo the β Camilla of Fabricius.

The ultimate opinion of Fabricius is however different, for in the *Entomologia Syſtematica* ſince publiſhed, Camilla and Sibilla ſtands a diſtinct ſpecies; and Camilla is thus deſcribed, "alis dentatis atris coeruleo micantibus: faſcia utrinque maculari alba, poſticis ſubtus baſi argentea immaculata." *Linn. Syſt. Nat.* 2. 781. 187. *habitat in Auſtria.* Thus P. Camilla will no longer agree with our inſect, nor with that figured by *Roeſel, plate* 33. *fig* 3. But if we refer to the Syſtema Naturæ of Linnæus, we diſcover another error, for

---

* Roeſel's figure, vol. 3. tab. 70. has an obſcure red band entirely acroſs the poſterior wings.—Schæffer's figure has no trace of red on that part.

† Erratum.—Deſigned for 153—for 152 is the German variety of Papilio Iris, Purple Emperor Butterfly.

inſtead

inſtead of the above quoted ſpecific character, Linnæus only ſays, " Alis dentatis fuſcis ſubconcoloribus albo faſciatis maculatiſque, angulo ani rubro." *p.* 781. 187. and this is clearly our inſect.— From this the whole of the Fabrician account is obviouſly a complicated error of deſcription and ſynonyms, and without attempting to inveſtigate it further, we ſhall ſpeak of both ſpecies as they appear to us.

We conſider the Common Engliſh Admirable, as the true *P. Camilla*; and that Sibilla, and not Camilla is the Auſtrian ſpecies, as we have received it from that country; it is *much darker* in the *upper ſurface*, and has a *row* of *ſhining blue ſpots* all round the wings: the *baſe* of the *poſterior wings*, beneath *ſilvery* and *without ſpots*, as Fabricius deſcribes his Camilla. Our inſect on the contrary has *no row of blue ſpots* on the *upper ſurface*, but a *red ſpot* at the inner angle of the poſterior wings; the *baſe* of the *lower wings* are alſo *ſilvery beneath*, but *has black ſpots* upon it. They differ in many other reſpects: theſe alone determine them to be two ſpecies, and ours to be the *Camilla* of Linnæus.

We have inſpected the drawings of Mr. Jones, from which Fabricius deſcribes moſt of his Papiliones, and are confirmed in our opinion.

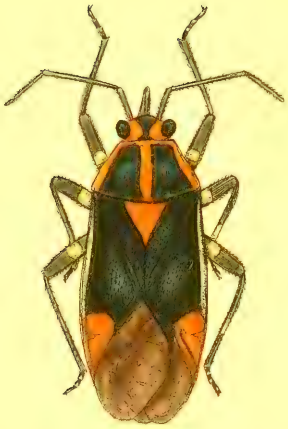


PLATE CCXLV.

CIMEX FLAVO-MARGINATUS.

GENERIC CHARACTER.

Roſtrum inflected. Antennæ longer than the thorax, wings folded croſswiſe, thorax margined. Feet formed for running.

SPECIFIC CHARACTER.

Black, longitudinal line on the thorax. Scutellum, exterior margin of the elytra, and ſpot in the apex yellow.

CIMEX FLAVO-MARGINATUS niger, thoracis lateribus lineaque dorſali, ſcutello elytrorumque margine apiceque macula flavis.

A nondeſcript ſpecies: it was found on a thiſtle.

The line at fig. 1 denotes the natural ſize.

2
1
1

PLATE CCXLVI.

FIG. I.

PHALÆNA PARTHENIAS.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings deflexed. Firſt pair with greyiſh waved bars acroſs. Second pair orange-red, having a large triangular black ſpot at the interior edge.

PHALÆNA PARTHENIAS: *Linn. Syſt. Nat.* 2. 835.94. *Fn. Sv.* 1160.

BOMBYX VIDUA, alis deflexis fuſcis: anticis cinereo ſubfaſciatis, poſticis macula baſeos faſciaque rufis. *Fab. Ent. Syſt. T.* 3. *p.* 1. 468, 190.

This ſpecies was deſcribed by Linnæus as *Phalæna Parthenias*; Fabricius alters it to *Vidua*. It is not figured by any author unleſs the *Ph. Geom.* Glauco faſciata Gözii, figured in *Kleman. T.* 1. *tab.* 40. *fig.* 4, 5, be the ſame inſect.

Found

Found on the white Poplar. (Populi Alba). It is a rare Insect and has been taken in Hornsey Wood in May.

FIG. II.

PHALÆNA DUBITATA.

Tissue Moth.

SPECIFIC CHARACTER.

Antennæ setaceous, wings waved with brown grey and black. The nerves of the wings spotted with white.

Phalæna dubitata, seticornis alis obscuris fusco cinereoque undatis: nervis albo punctatis. *Fab. Ent. Syst. T.* 3. *p.* 2. 168. 141.

Phalæna dubitata. *Wien. Verz.* 109. 3.

The Tissue Moth is rarely met with near London. Our specimen was taken near Bath.

PLATE

PLATE CCXLVII.

PAPILIO PAPHIA.

SILVER STRIPE FRITILLARY BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clubbed at the ends. Wings erect, when at reſt. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings dentated fulvous, ſpotted with black, under-ſide ſtriped with ſilver.

PAPILIO PAPHIA: Alis dentatis fulvis nigro maculatis, ſubtus faſciis argenteis. *Linn. Syſt. Nat.* 2. 786, 209.
Fn. Sv. 1064.
Geoffr. Inſ. 2. 42. 8.
Roeſ. Inſ. 1 *pap.* 1 *tab.* 7.
Schæff. Icon. tab. 27. *fig.* 3. 4.
Wilks pap. 57. *tab.* 2, *a.* 7.

Papilio Paphia is an elegant ſpecies of the Britiſh Papiliones. In ſize, colour, and general appearance of the upper ſide it is very ſimilar to Papilio Agala; in the underſide, it is extremely different. Both

Both of theſe Butterflies are remarkable for that pecular ſhining appearance of poliſhed ſilver with which a few other of the european Fritillary Butterflies are ornamented; but in Papilio Agala, this ſilver is diſpoſed in diſtinct ſplaſhes or ſpots, while in Papilio Paphia it appears in tranſverſe ſtreaks. Theſe ſtreaks are finely ſoftened into the red and olive green of the wings, and produce altogether a ſingular and charming effect. It is from the latter circumſtance the early Engliſh collectors termed this the *ſilver-waſh* Fritillary.

The Caterpillar of this butterfly is found on the graſs in May. It is of a plain yellowiſh brown, with ſeveral longitudinal ſtripes of dark brown; it is alſo thickly beſet with barbed ſpines, a quarter of an inch in length, and has in particular two of a remarkable form on the firſt annulation next the head. It remains in the chryſalis twenty or twenty one days; and appears in the winged ſtate early in June.

1
2
3

PLATE CCXLVIII.

FIG. I. II.

PHALÆNA ATOMARIA.

Dark Heath Moth.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Antennæ feathered. Wings entirely yellowiſh; with bands of brown, and the whole thickly ſprinkled with atoms of the ſame colour.

Phalæna Atomaria: pectinicornis; alis omnibus luteſcentibus faſciis atomiſque fuſcis. *Linn. Faun. Suec.* 1245.—*Syſt. Nat. p.* 862. *n.* 214.
Phalæna iſoſelata. *Scop. carn.* 558. *female.*
Phalæna pennata. *Scop. carn.* 569. *male.*

The Dark Heath Moth is conſidered as the Phalæna Atomaria of Linnæus, in the *Faun. Suec.* and *Syſtema Naturæ.* Fabricius adopts the Linnæan character, though in the Synonyms it is confounded with another *Geometræ*, the *Hirtaria* of ſome entomologiſts. He refers to the *Phalæna iſſoſelata* and *Phalæna pennata* of Scopoli, which are evidently the two ſexes of the Dark Heath Moth; but the Inſect figured in Plate XXXIV. *Kleman's Inſ.* is very diſtinct, and is the P. Hirtaria before alluded to. We cannot but obſerve how cloſely

the Linnæan deſcription will apply in this inſtance, to two Inſects which at firſt ſight appear ſo extremely different.

This ſpecies is very common on heaths in May. The male is much darker in colour than the female, and has curious pectinated and ciliated antennæ, as Scopoli obſerves. The female has been miſtaken for a diſtinct ſpecies.

FIG. III.

PHALÆNA CLATHRATA.

PALE HEATH MOTH.

SPECIFIC CHARACTER

AND

SYNONYMS.

Antennæ ſetaceous. Wings entirely yellowiſh, with tranſverſe and longitudinal dark lines interſecting each other.

PHALÆNA CLATHRATA: ſeticornis alis omnibus flaveſcentibus: lineis nigris decuſſatis. *Lyn. Syſt. Nat.* 2. 867. 238. —*Fn. Sv.* 1275.—*Fab. Ent. Syſt.* 3. *p.* 2. *p.* 183. 194.
Schæff. Icon. tab. 216. *fig.* 2. 3.
Scop. Carn. 536.
Sulz. Hiſt. Inſ. tab. 23. *fig.* 2.

This is a rare inſect, except in Kent, where Dr. Latham informs us it is more common than the preceding ſpecies. Both ſexes are very ſimilar to the female Dark Heath Moth. The larva is unknown, but is ſuppoſed to feed on the *Erica*, being always found on theſe plants in the winged ſtate. Theſe inſects have been called Heath Moths becauſe they live in heaths, chalk-pits, and other barren places.—The Moths appear in June.

PLATE

2

2

1

3

1

PLATE CCXLIX.

FIG. I. I.

CURCULIO RUFUS.

GENERIC CHARACTER.

Antennæ ſubclavated, ſeated in the ſnout or proboſcis, which is prominent.

SPECIFIC CHARACTER.

Snout long. Feet formed for leaping, entirely red, except the eyes, which are black.

CURCULIO RUFUS: longiroſtris pedibus ſaltatoriis, totus rufis, oculis nigris ſolis exceptis. *Marſh. MS.*
Geoff. Inſ. 1. 286. 19. 2.

Probably a new ſpecies; it differs from the *Curculio Quercus* of the *Faun Suec*, and *Curculio viminalis* of *Ent. Syſt.* in having the abdomen red, and being rather larger.

FIG. II. II.

CURCULIO ALNI.

COLEOPTERA.

SPECIFIC CHARACTER.

Snout long. Feet formed for leaping. Elytra livid red, with two obſcure ſpots.

CIRCULIO

Curculio Alni: longiroſtris, pedibus ſaltatoriis elytris lividis, maculis duabus obſcuris. *Faun. Suec* 608.—*Fab. Ent. Syſt. I.* 445. 216.

Feeds on the leaves of the Alder.

The ſmalleſt inſect at Fig. 2. repreſents the natural ſize.

FIG. III.

CURCULIO TENUIROSTRIS.

SPECIFIC CHARACTER.

Snout long, thighs dentated, black, a ſhort tranſverſe white ſtripe on the elytra. Antennæ red.

Curculio tenuiroſtris: longiroſtris, femoribus dentatis niger, elytris albo ſubfaſciatis, antennis rufis. *Fab. Ent. Syſt.* I. *p.* 2. 443. 204.

Deſcribed by Fabricius from the cabinet of Sir Joſeph Banks, Bart. without a reference to any figure. His general deſcription is, Minor. C. Ceraſorum. Caput nigrum roſtro tenui, atro, glabro. Antennæ rufæ clava cinerea. Thorax niger pilis breviſſimis cinereis. Scutellum cinereum. Elytra nigra faſciis plurimis, undatis pallidioribus.

PLATE CCL.

PAPILIO BETULÆ.

BROWN HAIR STREAK BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clubbed. Wings erect when at reſt. Fly by day.

SPECIFIC CHARACTER

AND

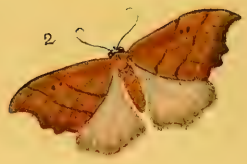
SYNONYMS.

Wings furniſhed with ſmall tails. Above, brown: beneath yellowiſh, with two white ſtripes on the poſterior wings.

Papilio Betulæ: alis ſubcaudatis fuſcis ſubtus luteis: poſticis ſtrigis duabus albis. *Lyn. Syſt. Nat.* 2. 220.—*Fn. Sv.* 1070.

Heſperia Betulæ. *Fab. Ent. Syſt.*
Geoff. Inſ. 2. 58. 27.
Albin. Inſ. tab. 5. *fig.* 7.
Ernſt. Pap. Europ. 1. *tab.* 35. *fig.* 7.
Hufnag. Inſ. tab. 12. *fig.* 1.
Petiv. Gazoph. tab. 11. *fig.* 11.

The male of this ſpecies is diſtinguiſhed by a large fulvous mark or ſpot on the anterior wings. The larva is very remarkable, being broad and flat. It is found in the months of May and June on the Alder and Sloe. Changes to Chryſalis the firſt week in July. The Flies appear in Auguſt.


2

1

3

PLATE CCLI.

FIG. I.

PHALÆNA SUBERARIA.

Waved Umber Moth.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER.

Antennæ pectinated, yellowiſh. A dark ferruginous daſh acroſs the ſuperior wings, and a band of the ſame on the inferior pair. The whole of the upper ſurface ſtreaked with numerous irregular tranſverſe lines.

PHALÆNA SUBERARIA: pectinicornis luteſcens, alis ſuperioribus litura, inferioribus faſcia fuſco ferrugineis, omnibus ſtrigoſis. *Marſham MS.*

The Waved Umber Moth is found on the Oak in May. It is deſcribed only in the MS. of T. Marſham, Eſq.

FIG. II.

PHALENA LACERTINARIA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Antennæ feathered. Wings much indentated, yellowiſh brown. Two dark lines acroſs the anterior wings, and a light ſpot in the middle. Poſterior wings without any marks.

PHALÆNA LACERTINARIA, pectinicornis alis eroſis luteſcentibus: ſtrigis duabus punctoque medio fuſcis, poſticis immaculatis. *Lin. Syſt. Nat.* 2. 860. 204.
Fab. Ent. Syſt. T. 3. *p.* 2. 135.
Schæf. Icon. tab. 66. *fig.* 2. 3.
Degeer. Inſ. 1. *tab.* 10. *fig.* 7. 8.
Reaum. Inſ. 2. *tab.* 22. *fig.* 4—6.

Found on the Oak in May and June.

FIG.

FIG. III.

PHALÆNA MACULATA.

SPECIFIC CHARACTER.

Wings yellow ſpotted with black.

PHALÆNA MACULATA: ſeticornis alis flavis nigro maculatis. *Fab. Ent. Syſt. T.* 3. *p.* 2. 197. 244.
Phalæna Macularia. *Lynn. Syſt. Nat.* 2. 862. 213.

Extremely common about the hedges in the vicinity of London during the months of June and July.

2

2

1

1

PLATE CCLII.

FIG. I. I.

CIMEX VITTATUS.

GENERIC CHARACTER.

Roſtrum inflected. Antennæ longer than the thorax. Wings folded croſswiſe. Back flat. Thorax margined. Feet formed for running.

SPECIFIC CHARACTER.

Black. Anterior and poſterior part of the thorax yellow: ſcutellum yellow. Baſe of the antennæ, and elytra red; the latter with a longitudinal whitiſh ſtripe: and bent in at the apex.

CIMEX VITTATUS: thorace anterius poſteriuſque ſcutelloque flavis, antennarum baſi elytriſque rufis: vitta apiceque inflexo albis. *Gmel. Syſt. Nat. p.* 2166. *n.* 631?

Taken on the Roſe. Fig. I. I. natural ſize, and magnified.

FIG. II. II.

CIMEX POPULI.

SPECIFIC CHARACTER.

Oblong. Whitiſh, clouded and ſprinkled with brown. Antennæ ſetaceous.

CIMEX POPULI: oblongus albo fuſcoque nebuloſus antennis ſetaceis.
Linn. Faun. Suec. 963.

Very common againſt the trunks of trees, the Poplar in particular.

LINNÆAN INDEX

TO

VOL VII.

COLEOPTERA.

	Plate	Fig.
Dermeſtes Pellio - - - -	231.	3.
——— Scarabœides - - -	ib.	4.
Coccinella Annulata - - -	243.	2. 2.
——— 14 guttata - - -	ib.	1.
——— Caſſidoides - - -	ib.	3.
Curculio Rufus - - - -	249.	1.
——— Alni - - - -	ib.	2.
——— Tenuiroſtris - - -	ib.	3.
Attelabus Apiarius - - -	231.	1.
——— Formicarius - - -	ib.	2.
Carabus Violaceus - - -	222.	1.
——— Gemmatus - - -	ib.	2.
——— Granulatus - - -	ib.	3.
Meloe Tecta - - - -	240.	

HEMIPTERA.

Cimex Gonymelas - - -	218.	1.
——— Hæmorrhoidalis - - -	ib.	2.
——— Vittatus - - - -	252.	1.
——— Populi - - - -	ib.	2.
——— Flavo marginatus - - -	245.	

NEUROP-

INDEX.

LEPIDOPTERA.

	Plate	Fig.
Papilio Hyale	238.	1.
—— Eduſa	ib.	2.
—— Camilla	244.	
—— Paphia	247.	
—— Cinxia	242.	1.
—— Lucina	ib.	2.
—— Betulæ	250.	
—— Hippothoe ?	217.	
—— Corydon	236.	1. 2.
Sphinx Convolvuli	228.	
—— Larva et Pupa	229.	
—— Populi	241.	
Phalæna Monacha	227.	
—— Vidua	246.	1.
—— Compreſſa	239.	2.
—— Trepida	ib.	1.
—— Nupta	224.	
—— Maura	230.	1.
—— Lucipara	ib.	2.
—— Deraſa	223.	1.
—— Lichenes	ib.	3.
—— Tragopoginis	ib.	2.
—— Myrtilli	221.	
—— Prodomaria	219.	
—— Betularia	237.	
—— Prunaria	233.	1.
—— Duplicata	ib.	2.
—— Veſpertaria	ib.	3.
—— Chærophyllata	ib.	4.
—— Dubitata	246.	2.
—— Atomaria	248.	1. 2.
—— Clathrata	ib.	3.
—— Suberaria	251.	1.
—— Lacertinaria	ib.	2.
—— Maculata	ib.	3.

NEUROPTERA.

INDEX.

NEUROPTERA.

	Plate	Fig.
Phryganea Rhombica - - -	220.	

HYMENOPTERA.

Tenthredo Lutea - - -	234.	
Sirex Spectrum - - - -	223.	
Chryſis Cyanea - - - -	235.	
Veſpa Vulgaris - - - -	226.	

ALPHABETICAL

ALPHABETICAL INDEX

TO

VOL. VII.

	Plate	Fig.
Alni, Curculio - - - -	249	2.
Annulata, Coccinella - - -	243	2. 2.
Apiarius, Attelabus - - -	231	1.
Atomaria, Phalæna - - -	248	1. 2.
Betularia, Phalæna - - -	237	
Betulæ, Papilio - - - -	250	
Camilla, Papilio - - - -	244	
Caſſidoides, Coccinella - - -	243	3.
Chærophyllata, Phalæna - - -	233	4.
Cinxia, Papilio - - - -	242	1.
Clathrata, Phalæna - - -	248	3.
Compreſſa, Phalæna - - -	239	2.
Convolvuli, Sphinx - - -	228	
——— Pupa, ditto - - -	229	
Corydon, Papilio - - -	236	1. 2.
Cyanea, Chryſis - - -	235	
Deraſa, Phalæna - - -	223	1.
Dubitata, Phalæna - - -	246	2.
Duplicata, Phalæna - - -	233	2.
Eduſa, Papilio - - - -	238	2.

Flavo-

	Plate	Fig.
Flavo-marginatus, Cimex	245	
Formicarius, Attelabus	231	2.
Gemmatus, Carabus	222	2.
Gonymelas, Cimex	218	2.
Granulatus, Carabus	222	3.
Hæmorrhoidalis, Cimex	218	2.
Hippothoe? Papilio	217	
Hyale, Papilio	238	1.
Lacertinaria, Phalæna	251	2.
Lichenes, Phalæna	223	3.
Lucina, Papilio	242	
Lucipara, Phalæna	230	2.
Lutea, Tenthredo	234	
Maculata, Phalæna	251	3.
Maura, Phalæna	230	1.
Myrtilla, Phalæna	221	
Nupta, Phalæna	224	
Paphia, Papilio	247	
Pellio, Dermeſtes	231	3.
Populi, Sphinx	241	
Populi, Cimex	252	2. 2.
Prodromaria, Phalæna	219	
Prunaria, Phalæna	233	1.
14-guttata, Coccinella	243	1. 1.
Rhombica, Phryganea	220	
Rufus, Curculio	249	1.
Scarabœides, Dermeſtes	231	4.
Spectrum, Sirex	223	
Suberaria, Phalæna	251	1.

	Plate	Fig.
Tecta, Meloe - - - -	240	
Tenuiroſtris, Curculio - - -	249	3.
Tragopoginis, Phalæna - - -	223	2.
Trepida, Phalæna - - -	239	1.
Veſpertaria, Phalæna - - -	233	3.
Vidua, Phalæna - - - -	246	1.
Violaceus, Carabus - - -	222	1.
Vittatus, Cimex - - - -	252	1. 1.
Vulgaris, Veſpa - - - -	226	

Thomas Handasyd Perkins.